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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,009	12/12/2005	Arthur William Woolhouse	IP21L3.001APC	7875

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EXAMINER

MINSKEY, JACOB T

ART UNIT	PAPER NUMBER
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4151

NOTIFICATION DATE	DELIVERY MODE
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10/06/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/530,009	Applicant(s) WOOLHOUSE, ARTHUR WILLIAM	
	Examiner JACOB T. MINSKEY	Art Unit 4151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 8-17 is/are rejected.
- 7) ☐ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/01/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/24/2007 and 12/12/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 9-11 are objected to because of the following informalities: Claims make references to "step (c)", which does not have antecedent basis in claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8, 11, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka, JP 09109310 A.

5. Regarding claim 8, Tanaka teaches:

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A method of producing a laminate comprising the following steps:

Forming patches (cutting pieces [0008]) from a substantially unidirectional fabric (one way, [0007]), treated with a resin [0007]; the patches being formed to predetermined shape(s) and size(s) to suit the product in which the laminate is to be used [0008];

Forming substantially loose and randomly oriented patches ([0008] and figure 1);

Distributing said substantially loose and randomly oriented patches in layers around a product mould (random plane direction [0008] and figure 1);

Causing said layers of patches once distributed around said product mould to amalgamate by means of activation of the resin treatment ([0008] and [0012]).

6. Regarding claim 11, Tanaka remains as applied in claim 8 and further teaches that the said patches have an average surface area of no greater than 20% of the surface area of the layer formed in step (c) (shown in example [0015], the listed wafer size is less than 20% of the mold size).

7. Regarding claim 15, Tanaka teaches a laminate (fiber reinforced material [0007]) comprising randomly orientated patches ([0008] and figure 1) each formed from a substantially unidirectional fabric (random plane direction [0008] and figure 1) treated with a resin [0007] and all amalgamated by means of activation of the resin treatment ([0008] and [0012]).

8. Regarding claim 16, Tanaka remains as applied in claim 15 and further teaches that the said patches have an average surface area of no greater than 20% of the laminate (shown in example [0015], the listed wafer size is less than 20% of the mold size).

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka, JP 09109310 A in view of Schiess et al, USP 3,066,358.

12. Regarding claim 9, Tanaka remains as applied in claim 8 but is silent on the conveying means for the distribution step.

13. In the same field of endeavor of producing laminate materials, Schiess et al teach the means for distributing patches in step (c) is a suction device (suction manifold, column 6 lines 22-24) for the benefit of using a suction device to collect, transport and deposit the fiber material in a desired location in order to change the fiber orientation.

14. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Schiess's use of a suction device in the Tanaka method for the

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benefit of using a suction device to collect, transport and deposit the fiber material in a desired location in order to change the fiber orientation.

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka, JP 09109310 A in view of Villagrasa, USP 5,137,590.

16. Regarding claim 10, Tanaka remains as applied in claim 8 but is silent on the conveying means for the distribution step.

17. In the same field of endeavor of producing laminate materials, Villagrasa teaches the means for distributing patches in step (c) is a pneumatic conveyor (conveyor belt, column 2 lines 54-56) for the benefit of moving the laminate material from the mixer to the proper area.

18. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Villagrasa's use of a conveyor belt in the Tanaka method for the benefit of moving the laminate material from the mixer to the proper area.

19. Claims 12-14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka, JP 09109310 A in view of Evans, GB 2 216 531 A.

20. Regarding claim 12, Tanaka remains as applied in claim 8, and while Tanaka teaches a range of sizes that can be used in the invention, he is silent on using multiple sizes at once.

21. In the same field of endeavor of producing laminate materials, Evans teaches that a multiplicity of patch shapes and/or sizes is employed (page 2 lines 9-14) for the benefit of using differently sized and shaped material to combine the advantages of both long and short fiber reinforcements in the molded article.

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22. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Evan's use of multiple sized materials in the Tanaka method for the benefit of using differently sized and shaped material to combine the advantages of both long and short fiber reinforcements in the molded article.

23. Regarding claim 13, Tanaka remains as applied in claim 8 but does not teach distributing step is carried out at a controlled temperature, whereby patches are prevented from sticking to each other during said step.

24. In the same field of endeavor of producing laminate materials, Evans teaches cooling the material in order to prevent the onset of curing (page 2 lines 31-34) for the benefit of preventing the curing of the resin in the laminate until the desired time.

25. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Evan's use of temperature control in the Tanaka method for the benefit of preventing the curing of the resin in the laminate until the desired time.

26. Regarding claim 14, Tanaka remains as applied in claim 8, and while Tanaka teaches a range of sizes that can be used in the invention, he is silent on forming a group of patches where one or more patches traverse at least part of the thickness of said laminate.

27. In the same field of endeavor of producing laminate materials, Evans teaches forming a group of patches where one or more patches traverse at least part of the thickness of said laminate (inherent from the random direction of fibers page 2 lines 12-14 and bundle of filaments described pages 6 lines 33-37) for the benefit of using differently oriented fibers to strengthen the molded article.

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28. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Evan's use of multiple oriented materials in the Tanaka method for the benefit of using differently oriented fibers to strengthen the molded article.

29. Regarding claim 17, Tanaka remains as applied in claim 15, and while Tanaka teaches a range of sizes that can be used in the invention, he is silent on using multiple sizes at once.

30. In the same field of endeavor of producing laminate materials, Evans teaches that a multiplicity of patch shapes and/or sizes is employed (page 2 lines 9-14) for the benefit of using differently sized and shaped material to combine the advantages of both long and short fiber reinforcements in the molded article.

31. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Evan's use of multiple sized materials in the Tanaka method for the benefit of using differently sized and shaped material to combine the advantages of both long and short fiber reinforcements in the molded article.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. EP 916477 A1 to Duqueine (already of record) teaches a method for molding composite prepregs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACOB T. MINSKEY whose telephone number is (571)270-7003. The examiner can normally be reached on Monday to Friday 7:30-5:00 EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on 571-272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTM

***/Angela Ortiz/
Supervisory Patent Examiner, Art Unit 4151***